

Serial No.: 10/630,880
Group Art Unit No.: 1648

Amendments to the Claims:

Claim 1-35 (Cancelled).

Claim 36 (Currently Amended) A method of expressing ~~an HPV~~ a human papillomavirus (HPV) polypeptide in a mammalian cell comprising:

~~(a) providing a polynucleotide encoding an HPV polypeptide wherein the codon usage pattern of the of the polynucleotide resembles the codon usage pattern of highly expressed mammalian genes of greater than 0.5 but less than 1.0, and~~

~~(b) delivering the~~ a codon-optimized polynucleotide encoding an HPV polypeptide to a mammalian cell of a mammalian species, said polynucleotide having a codon usage pattern that resembles the codon usage pattern of highly expressed genes of a mammalian species and a codon usage coefficient of greater than 0.5 but less than 1.0,

whereby wherein said encoded polypeptide is expressed by the ~~mammalian-cell~~.

Claim 37 (Previously presented). The method of Claim 36 wherein the mammalian cell is a human cell.

Claim 38 (Currently amended). The method of Claim 36 wherein ~~the mammalian cell is a human cell~~ the HPV polypeptide comprises an HPV early protein or fragment or derivative thereof.

Claim 39 (Previously presented). The method of Claim 38 wherein the early protein is a member selected from the group consisting of E1, E2 and E7.

Claim 40 (Previously presented). The method of Claim 38 wherein the polypeptide comprises more than one HPV early protein.

Claim 41 (Previously presented). The method of Claim 36 wherein the HPV polypeptide is from at least one member selected from the group consisting of HPV 6a, HPV 6b, HPV 11, HPV 16, HPV 18, HPV 33 or HPV 45.

Claim 42 (Previously presented). The method of Claim 41 wherein the HPV polypeptide is from at least one member selected from the group consisting of HPV 6a, HPV6b and HPV11.

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Claim 43 (Previously presented). The method of Claim 42 wherein the HPV polypeptide is an E2 protein.

Claim 44 (Cancelled).

Claim 45 (Cancelled).

Claim 46 (Currently Amended) The method of claim 36, wherein said mammalian species is human ~~the codon usage pattern of the polynucleotide resembles the codon usage pattern of highly expressed human genes.~~

Claim 47 (Currently Amended) A method for preventing or treating an HPV infection in a human, or a symptom or disease associated ~~therewith~~ with said HPV infection, comprising administering to a human a codon-optimized polynucleotide encoding an HPV polypeptide ~~wherein the~~ having a codon usage pattern ~~of the polynucleotide~~ that resembles the codon usage pattern of highly expressed ~~mammalian~~ human genes and a codon usage coefficient of greater than 0.5 but less than 1.0.

Claim 48 (Previously presented). The method of Claim 47 wherein the polynucleotide is provided in the form of a vector.

Claim 49 (Previously presented). The method of Claim 48 wherein the vector is a plasmid.

Claim 50 (Previously presented). The method of Claim 48 wherein the vector is a viral vector.

Claim 51 (Previously presented). The method of Claim 47 wherein the polynucleotide is administered by needle injection.

Claim 52 (Previously presented). The method of Claim 47 wherein the polynucleotide is administered by particle-mediated DNA delivery.

Claim 53 (Previously presented). The method of Claim 47 wherein the polynucleotide is administered topically.